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PREACTIVE TEACHING PRACTICE OF FEMALE ELEMENTARY TEACHERS

B. Ballhorn

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Suite 400 - 515 West 10th Avenue  
Vancouver, B.C. V5Z 4A8

Telephone: 873-3801

PREACTIVE TEACHING PRACTICE OF FEMALE  
ELEMENTARY TEACHERS

By

BARBARA JEAN BALLHORN

B.Sc., University of Alberta, 1967

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES  
Department of Social and Educational Studies

We accept this thesis as conforming

to the required standard

*Charles S. Langford*  
.....  
*L.B. Daniels*  
.....  
*John H. ...*  
.....

THE UNIVERSITY OF BRITISH COLUMBIA

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## ABSTRACT

The purposes of this general, speculative study were to describe how teachers think about the decisions they make during preactive planning; and to describe the bases teachers use in arriving at the decisions they make. The theoretical framework of the investigation was based on three methods that teachers are thought to use when they fix belief. They were the method of authority, the method of science, and the method of practical reasoning.

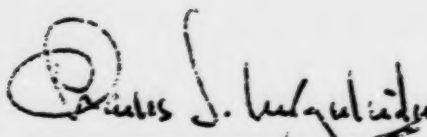
The study involved interviewing 20 fulltime, female, Grade 4 teachers selected from a large, metropolitan district in a Western Canadian province. The sample included teachers who held a B.Ed. degree from the University of British Columbia; possessed a permanent teaching contract or at least a three year temporary contract in the district; and had at least three years of teaching experience.

The major findings and conclusions of this study were:

1. Teachers used the method of practical reasoning in basing their planning decisions when they felt confident about the knowledge level of the subject;
2. Teachers relied moderately to heavily on materials and/or programs developed by others but felt that these materials needed to

be previewed and adapted to their individual teaching styles and perspectives; 3. Teacher planning behavior was influenced to a large degree by two external factors - student characteristics and availability of time and materials.

The implications of these findings on formulating district program policy are significant. By holding the assumption that what teachers do is affected by what they think, these findings are interim steps that may help educators understand more about the preactive planning process. Although it is unreasonable to assume that all teachers plan the same way, measures might be taken in a general way to recommend improvements in preservice and inservice education of teachers.

A handwritten signature in dark ink, appearing to read "Charles J. Ludwig". The signature is written in a cursive, somewhat stylized script. Below the signature is a horizontal line.

Supervisor

## TABLE OF CONTENTS

|                                                           | Page |
|-----------------------------------------------------------|------|
| Abstract . . . . .                                        | ii   |
| Table of Contents. . . . .                                | iv   |
| Acknowledgements . . . . .                                | vi   |
| CHAPTER I. . . . .                                        | 1    |
| Statement of the Problem . . . . .                        | 2    |
| Purpose of the Study . . . . .                            | 3    |
| Theoretical Framework of the Study . . . . .              | 4    |
| Formation of Beliefs . . . . .                            | 5    |
| Method of Authority. . . . .                              | 6    |
| Method of Science. . . . .                                | 6    |
| Method of Practical Reasoning. . . . .                    | 6    |
| Format of the Study. . . . .                              | 7    |
| CHAPTER II. REVIEW OF THE LITERATURE . . . . .            | 8    |
| Information Processing Model . . . . .                    | 8    |
| Decision-Making Model. . . . .                            | 9    |
| Comparing Research Models to Specific<br>Studies. . . . . | 10   |
| Research about Teachers' Implicit<br>Theories . . . . .   | 10   |
| Research about Teacher Planning. . . . .                  | 13   |
| Research about Teacher Judgment. . . . .                  | 16   |
| Summary. . . . .                                          | 19   |
| Summary of Literature on Teacher Planning. . . . .        | 21   |
| CHAPTER III. METHOD . . . . .                             | 22   |
| Research Design. . . . .                                  | 22   |
| Instruments. . . . .                                      | 23   |
| The Interview Schedule . . . . .                          | 23   |
| Rationale for the Interview Schedule . . . . .            | 23   |
| Subjects . . . . .                                        | 25   |
| Selection of Subjects. . . . .                            | 26   |
| Rationale for Selection Criteria . . . . .                | 27   |
| Procedure. . . . .                                        | 28   |
| Contact with Subjects. . . . .                            | 28   |
| Data Collection. . . . .                                  | 29   |
| Data Analysis. . . . .                                    | 30   |

## TABLE OF CONTENTS (Continued)

|                                              | Page |
|----------------------------------------------|------|
| CHAPTER IV. RESULTS AND DISCUSSION. . . . .  | 32   |
| Results. . . . .                             | 32   |
| Teacher Experience . . . . .                 | 32   |
| Teacher Confidence . . . . .                 | 32   |
| Teacher Planning Time. . . . .               | 34   |
| Personal Perspective in Planning . . . . .   | 35   |
| Student Influence. . . . .                   | 39   |
| Availability of Materials and Time . . . . . | 40   |
| Discussion . . . . .                         | 42   |
| Isolation within the Classroom . . . . .     | 43   |
| Individualism within the Classroom . . . . . | 44   |
| Influences on Classroom Teaching . . . . .   | 45   |
| Implications . . . . .                       | 47   |
| CHAPTER V. SUMMARY AND CONCLUSIONS. . . . .  | 50   |
| Principal Findings and Conclusions . . . . . | 50   |
| Limitations of the Study . . . . .           | 52   |
| Recommendations. . . . .                     | 53   |
| Preservice Programs. . . . .                 | 53   |
| Inservice Programs . . . . .                 | 56   |
| Suggestions for Future Research. . . . .     | 59   |
| Bibliography . . . . .                       | 62   |
| APPENDIX I. Interview Schedule. . . . .      | 68   |
| APPENDIX II. Initial Contact Letter. . . . . | 69   |
| APPENDIX III. Definitions of Terms. . . . .  | 73   |

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An acknowledgement of thanks must be given to all the participants of the study. Conventions of anonymity prevent me from naming the many teachers who so willingly gave of their time and assisted in giving me data that only they could have provided.

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## CHAPTER 1

In spite of the large number of studies devoted to teaching, little is known about how teachers think. For the most part, studies of teaching have concentrated on the visible events in classrooms and in other settings where teaching takes place. The bias toward what is immediately apparent has meant that researchers have been more interested in what happens during the process of teaching than they are in what happens before the teaching occurs.

The examination of teaching is important for understanding the process of education. It would be a mistake to assume, however, that the interaction between the teacher and the student represented all or even the most important phase of teaching.

Teachers do many things in addition to their interactions with students. The lesser known aspects of teachers' work are both legitimate parts of professional activity and deserving of careful study. The analysis of what Jackson (1965) calls the "empty classroom" of teaching may increase understanding of the less visible features of the educational process.

### Statement of the Problem

There is a startling lack of research about teacher thinking processes. A review of the literature about the ways that teachers think about what they do during the "preactive" (Jackson, 1965) stage of teaching yields little useful material. In view of the widespread acceptance of the virtue of planning, the absence of empirical evidence about how teachers think about planning is surprising.

Three reasons may account for the absence of research about teacher thinking processes. Firstly, "thought processes" are not observable. People must be questioned about their thinking or their thought must be inferred from the way they behave. Another reason is that researchers have not typically distinguished between the ways teachers behave and the ways teachers think. Lastly, research about teacher thinking may be considered an intrusion into the private aspects of the professional lives of teachers. Questions about the way professionals apply theoretical knowledge to particular cases, problems and situations may be regarded as inappropriate, especially after teachers have acquired professional standing.

There is, nevertheless, the common assumption running through the literature about teaching that the way teachers plan is guided by sets of organized beliefs. It has been

assumed that teachers learn from their observation and selective imitation of other teachers, especially teachers they had during their years of studentship (Lortie, 1975). In other words, it is assumed that teachers develop beliefs about teaching from their observation of others. These beliefs serve as principles of conduct for their own teaching. Scheffler (1965), for example, believes that teachers' personal beliefs about how learning occurs and how learning opportunities should be organized influence how teachers plan and how they teach. Eisner and Vallance (1974) speculate that personal factors have a major impact on how teachers plan and carry out their plans.

The literature does not make clear the relationship between teacher beliefs and the way teachers plan and teach. If educators wish to use information about teaching as a basis for improving teaching, they need systematic information about how and why teachers think as they do. As Jackson (1968) puts it "the essence of learning is not merely doing, but thinking about what one is doing" (p. 12).

#### Purpose of the Study

Understanding how teachers think during the preactive phase of teaching is seen as the first of many steps

leading to recommendations about how teachers should plan.

The purposes of this study are:

1. to describe how teachers think about the decisions they make during planning; and
2. to describe the bases teachers use in arriving at the decisions they make.

#### Theoretical Framework of the Study

To date, few studies have looked at why teachers use or do not use grounds of belief as a basis for their specific curricular and instructional decisions. Looking at teacher thinking processes when planning may enable researchers to recognize and understand the importance of the overt and covert dispositions of teachers. Research about planning may provide some insight into the professional lives of teachers, enabling researchers to understand how teachers make decisions about teaching.

This investigation assumes that what teachers do is affected by what they think. Specifically, the purposes of the study are to seek answers to two questions:

1. On what grounds do teachers base their decisions about planning?
  2. Why do teachers base their decisions on these grounds?
-

### Formation of Beliefs

"Teaching has to do, in part at least, with the formulation of beliefs, and that means that it has to do not simply with what we shall believe but with how we shall believe it" (Green, 1971, p. 48). The psychological strength of beliefs are quite different from the grounds or reasons on which people base their beliefs.

Beliefs do not exist in isolation. They exist in systems, related to one another in complex ways (Green, 1971). Green says that teaching is an activity aimed at developing belief systems of a particular kind (p. 52). Teaching might be described as the continuing effort to reorganize and restructure our systems of belief. Education is concerned with transmitting not only what we know, but our manner of knowing, that is, our approved standards of competence in performance, in inquiry, and in intellectual criticism" (Scheffler, 1965, p. 2).

The establishment of beliefs which allow people to expedite and describe their dealing with experience have been given many philosophical interpretations. For the purposes of this study, three methods of fixing belief are distinguished to form a framework based on the writings of Peirce (1890), Scheffler (1965) and Green (1971). They are the "method of authority", the "method of science", and the

"method of practical reasoning".

#### Method of Authority

The method of authority might be adopted by teachers who turn to some authoritative person for the answer to any pedagogical question. In an educational context, this might be the authority a teacher perceives a principal, parent, colleague and/or a curriculum specialist to hold.

#### Method of Science

Teachers who base their decisions on research evidence systematically gathered and publicly evaluated can be said to have used the "method of science".

#### Method of Practical Reasoning

The method of practical reasoning involves a kind of practical wisdom, a sort of "sixth sense" on the part of the teacher (Green, 1971; Scheffler, 1965). A teacher might manifest a kind of wisdom based upon insight or intuition and a considerable body of past experience. For example, a teacher might "know" what works with a particular class based on past experience. (Despite the use of terms such as "insight", "intuition", "sixth sense", and "feelings", the researcher does not construe these as

precluding involvement of logic.)

#### Format of the Study

In the chapter that follows the literature about teacher thinking is reviewed. In the third chapter, the methodology of the study is presented in detail. The research design, the instruments, the subjects, the procedure and the data analysis are described. Chapter IV is devoted to the analysis and discussion of the results of the study. The final chapter opens with a summary of the principal findings and conclusions. Recommendations based on these findings are then made. The chapter closes with a discussion of the limitations of the study and a number of suggestions for future research.



## CHAPTER II

### Review of the Literature

Two models seem to dominate the research about teacher mental processes. They are an information-processing model and a decision-making model (Clark & Yinger, 1977). The differences between them are merely matters of emphasis (Clark, 1978).

#### Information-Processing Model

The information-processing model portrays the teacher as one who processes information selected from the environment. The information-processing model focuses on how teachers limit and structure the environment in which they act. It pays more attention to the teachers and the settings in which they work than it does to the actual decisions that teachers must make. The information-processing model seeks to provide an account of how people actually think and reach decisions -- not how they ought to.

The cognitive information-processing approach to research about teaching is concerned with the mental processes that are thought to underlie behavior during classroom interaction. For this reason, teachers' self-

reports of their thought processes often constitute the main source of data (Bussis, Chittenden & Amarel, 1976; Clark & Joyce, 1975; Morine & Vallance, 1975; Peterson & Clark, 1978). Teachers' self-reports are obtained by interviews and questionnaire methods, journal keeping and "thinking aloud" procedures where teachers are asked to verbalize all of their thoughts and decisions as they take place. Another technique is "stimulated recall", in which teachers are shown a videotape of their behavior and asked to both recall and recreate the mental processes that were taking place at the time the record was made. Ethnographic approaches are also used for gathering information.

#### Decision-Making Model

Research about teaching that is guided by the decision-making model seems to focus on explaining and understanding deliberate teacher activity. Jackson (1968) and Shavelson (1976) indicate that this research model is most suitable for looking at "empty classroom" behavior where the teacher has time to make decisions or judgments about what to do. Work by Borko, Cone, Russo and Shavelson (1979); Cadwell, Izu and Shavelson (1977) reflects the use of the decision-making model in investigating the psychology of teacher planning.

### Comparing Research Models to Specific Studies

Research about teachers' implicit theories. All human beings make predictions about the future on the basis of their previous experiences. Many of the judgments and decisions that teachers make are based in their beliefs and conceptions about what they teach. It is therefore important to study how teachers make sense of their world.

Janesick (1977) used an ethnographic approach to studying how teachers make sense of their world. In Janesick's study, extensive field notes based on classroom observations and teacher interviews were analyzed weekly to build, define and validate an account of the perspective of a single teacher. The teacher Janesick described was concerned about how the lessons which were planned influenced the social structure of the classroom. The teacher expressed his role as a leader responsible for planning activities that fostered group effort.

Duffy's continuing research in the area of teachers' beliefs and the teaching of reading (1977, 1979, 1980, 1981) has given us little conclusive evidence that teachers do consistently employ practices which reflect their personal beliefs. The reason for this lack of consistent evidence may be due to the difficulty of obtaining evidence about what teachers (and anyone) thinks. It may also be the

fact that teachers perceive questioning about how they apply theoretical knowledge to practical situations as inappropriate to their role as an experienced teacher. They may be giving the researcher socially desirable responses rather than personally held beliefs.

Brophy and Good (1974) conducted a study about teacher effectiveness by tracking individual students as they interacted with teachers. It was found that high achievers, students with personalities that appeal to teachers, and students who are physically attractive, tend to be the objects of high teacher expectations and more positive teacher attitudes. These students' characteristics and others, affect teachers' perception of students. They affect teacher expectations and attitudes regarding students which in turn affects the way the teachers plan for and deal with students.

Toomey (1977) reported that the perceptions teachers have of the key elements in the instructional process markedly influence how they plan for instruction. He found that planning, like teaching, is characterized by idiosyncratic behavior. Personal perceptions of what is appropriate for students tend to be dissimilar. For instance, one piece of material was rejected by one teacher on the grounds of its being sexist, whereas another rejected it

because the students would not enjoy it. Therefore it was difficult to construct a conceptual framework illustrating what specific things these teachers considered appropriate for instruction or how these specific things could be ordered for instructional purposes.

Floden, Porter, Schmidt, Freeman and Schwille (1980) found that teachers' decisions about fourth grade math content were influenced by the actions of other individuals in the educational system, as well as by the teachers' own beliefs about math. They presented 66 teachers with hypothetical vignettes which described specific curriculum situations. It was found that external pressures such as directives from central office, availability of textbooks, and the publication in the local paper of test results affected content decisions. They also found that these teachers did avoid teaching content which they personally found difficult.

Bussis et al. (1976) used an in-depth interview approach to produce a codified scheme of teachers' perceptions of classroom events. They used the scheme to confirm the perceptions previously given in the interviews. Results indicated that the relationship between teachers' perceptions and teachers' behavior was a relatively loose one which was guided by a set of organized beliefs often

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operating unconsciously.

In general, the research reviewed about teachers' implicit theories has used diverse methodologies but has similar results -- teachers' behavior is guided by their personal dispositions. Researchers have known for years that teachers draw upon the 'knowledge' they have gained from their previous experiences. Overall, the research about teachers' implicit theories has raised more questions than it has answered about method as well as about substance.

Research about teacher planning. Teaching has been depicted as a decision-making process (Shavelson, 1973, 1976; Shulman & Elstein, 1975). Decisions made while planning instruction may be the best ones teachers make. Unlike decisions during interactive teaching, decisions made in planning can be carefully considered. They can have the advantage of deliberation.

Planning is a direct outgrowth of the general teaching situation (Yinger, 1978). The uniqueness and complexity of each classroom situation necessitates some degree of teacher planning. At least five studies (Anderson & Evertson, 1978; Buckley & Cooper, 1978; Clark and Elmore, 1979; Schultz & Florio, 1979; Tichunoff & Ward, 1978)

support the notion that establishing the basic classroom organization, rules, procedures, and routines constitute the business of the first week of school and form a framework within which the work of the remainder of the school year is planned, organized, experienced and evaluated.

Traditionally, the literature about teacher planning has been mainly prescriptive. The most prevalent of these, over the past thirty years, has been the model proposed by Tyler (1950). Briefly, the model requires the planner to state objectives, select experiences, teach to the objectives, and evaluate according to the stated objectives. This model has been the object of much criticism. The disaffection of the linear approach to planning has led to a search for alternative models. For example, MacDonald (1965) and Eisner (1967) pointed to another model by demonstrating that teachers, in practice, do not always plan in a linear fashion. They showed that the objectives arise and exist only in the context of an activity. Students choose their own learning experiences and pursue their own objectives.

Taylor's (1970) research was conducted within the British secondary system. Although this study was more one of curriculum planning, evidence seemed to indicate that when teachers planned they tended to use district

objectives as guidelines for selection of activities. The teachers' interest in materials, activities and pupil interaction took precedence over what the Tyler model presumes must be paramount - i.e., the goals.

Zahorik (1970) examined the effects of structured planning on teacher classroom behavior. Zahorik noted that teachers who used Tyler's model were insensitive to pupils in the classroom. The reason for this appeared to be that the typical planning model made the teacher's thinking rigid and put him on a "track that was nearly derail-proof" (p. 149). Once the teacher decided what outcomes he wanted from the lesson and how he would achieve them, he set out to produce these outcomes regardless of what pupils introduced into the teaching-learning situation. He concluded from this that the typical planning model -- goals, activities and their organization and evaluation -- result in insensitivity to pupils on the part of the teacher.

In a later study, Zahorik (1975) continued his inquiry into teacher planning. He found that teachers differed in the views that they held concerning the relative importance of the key elements in the planning process. Some teachers, for instance, emphasized the importance of setting objectives in the planning process. Others were more concerned about the scope and particulars of subject

matter content before they planned a lesson or unit and very little time was spent on objectives. These findings were consistent with those of Goodlad, Klein and associates (1970), Morine (1976) and Peterson, Marx and Clark (1978).

Research about teacher judgment. Research studies about teacher judgments are very limited in scope and in number. The most frequently used method of studying and representing judgment processes is a policy-capturing approach (Shulman & Elstein, 1975; Slovic & Lichtenstein, 1971). This approach begins with a simple model and attempts to reproduce the inferential responses of a particular teacher-judge. Of central interest in this methodology is how judges weigh and combine information provided by discernible cues in the judgment task.

Anderson (1977) investigated the characteristics or "cues" teachers believed were important to them in making judgment "policies". She found that the cues that teachers said were important were not the same cues they used to judge actual situations. For example, enthusiasm was a cue rated and ranked by teachers as an important teacher characteristic, however, in actual practice other characteristics such as knowledge of subject and fairness in grading were taken into account more strongly than

enthusiasm. This finding seems to indicate that when making judgments, teachers may actually make decisions differently than the way they say they intend to make the decisions.

Shavelson et al. (1977) looked at the sensitivity of teachers to the reliability of information received as well as their willingness to revise initial judgments when presented with additional information. They found that teachers' estimates of student aptitude affected the way teachers taught students and that teachers were reasonably accurate in estimating their own students' ability, at least on a general level. Evidence is mixed on the extent to which teachers' judgments are flexible and responsive to new information.

Clark, Wildfong and Yinger (1978) conducted a study about teacher judgment in the use of specific teacher activities and materials. The researchers compiled and categorized 26 descriptions of language arts activities on writing selected from a commercially available instructional catalogue. In this judgment exercise, the teachers were asked to decide which of these materials they would prefer for use in their classrooms and why they selected what they did. For example, student motivation and involvement were mentioned most frequently as a basis

for accepting or rejecting a language arts activity. Similar findings were obtained by Marx (1978) in his work on teacher judgment.

We have now considered several examples of what some people call policy-capturing studies. In such studies initial observations of, for example, teacher choices, are classified and somewhat formalized. Then these formalized items are used for further studies. While in some studies accurate cue identification is important, it is an even more major problem in naturalistic studies. There is always the possibility that the judge can perceive and use cues not observed by the researcher. With this in mind the literature reviewed provides little guidance for identifying, selecting and defining cues to be judged. The small number of studies on teacher judgment yield results that are often very rich in the information they provide about a specific judgment task, however, the uniqueness of these tasks prevents us from making general statements about teacher judgment at this time.

To summarize, most of the literature review about teacher thinking processes focuses on teacher planning in highly controlled settings. Educators in general, and teachers specifically, have gleaned very little about how teachers plan in a realistic setting. Little is known

about how teacher planning behavior changes with experience and whether individual teacher differences such as personality influence the style of teacher planning. In general, the small number of studies yield generalizations which are so vague and general as to be of little help. Before educators may or may not agree on the meaning of any of this evidence, research evidence will have to be viewed as being representative of "important information". At this point there is little consensus in the understanding of why teachers decide as they do.

#### Summary

In summary, when planning is done well, it requires significant intellectual effort, drawing on practical and theoretical knowledge (Yinger, 1977). Planning involves a wide range of mental processes such as judgmental tasks (Marx, 1978; Shavelson et al., 1977; Yinger, 1978), decision-making (Clark & Joyce, 1975; Shavelson, 1973) and the use of implicit knowledge (Brophy & Good, 1974; Janesick, 1977). Teacher planning is vital to be well organized teaching (Anderson & Evertson, 1978; Buckley & Cooper, 1978; Clark & Elmore, 1979; Clark & Yinger, 1977, 1979; Shultz and Florio, 1979; Tichunoff & Ward, 1978). Individual teacher characteristics, student character-

istics, and curriculum characteristics combine to affect teacher planning (Anderson, 1970; Clark et al., 1978; Eisner & Vallance, 1974; Shavelson et al., 1977). Planning is a process oriented toward action in the classroom and interaction with other persons (team teachers, support staff, specialists, administrators) (Floden et al., 1980). External influences such as curriculum materials, classroom and school organization, administrative requirements and accountability systems affect planning (Anderson, 1970; Taylor, 1970; Toomey, 1977).

### Summary of Literature on Teacher Planning

#### Generalizations

Planning draws upon practical and theoretical knowledge.

Planning involves:

- decision-making
- judgmental tasks
- implicit knowledge

Planning is vital to well organized teaching.

Planning is affected by:

- teacher characteristics
- student characteristics
- curriculum characteristics

Planning is affected by external influences.

#### Research

Yinger, 1977

Clark and Joyce, 1975;  
Shavelson, 1973

Marx, 1978; Shavelson et al., 1977; Yinger, 1978

Brophy and Good, 1974;  
Bussis et al., 1976;  
Duffy, 1977

Anderson and Evertson, 1978;  
Buckley and Cooper, 1978;  
Clark and Elmore, 1979;  
Clark and Yinger, 1977, 1979;  
Shultz and Florio, 1979;  
Tichunoff and Ward, 1978

Anderson, 1977; Eisner and Vallance, 1974

Shavelson et al., 1977

Clark et al., 1978

Anderson, 1977; Floden et al., 1980; Taylor, 1970; Toomey, 1977



### CHAPTER III

#### Method

The primary objective of this study was to describe how and why teachers go about making certain types of planning decisions. The objective was approached by means of a descriptive study involving interviews with 20 Grade 4 teachers.

#### Research Design

This study investigated why and how teachers made particular curricular and instructional decisions during the pre-active phase of teaching. Given the complex nature of the preactive phase of teaching it was decided to use an interviewing procedure involving a set of semi-structured questions (see Appendix I). This technique enables a teacher to openly express her feelings about complex thought processes. Open-ended questions allow the respondent to describe in-depth how she thinks about her planning decisions. The flexibility and adaptability of this design also enables the researcher to probe into the meaning(s) of spontaneous responses.

### Instruments

The interview schedule. The interview schedule was based upon a framework derived from the philosophical work of Peirce (1890) and Scheffler (1965). For the purposes of this research, three methods of fixing belief were thought to be the bases upon which teachers made curricular and instructional decisions. They were: method of authority (Peirce, 1890), method of practical reasoning (Scheffler, 1965) and method of science (Scheffler and Peirce). Interview questions were structured around the theoretical framework.

Rationale for the interview schedule. In question 1 teachers were asked how many years they had taught. The reason for asking this question was based on how teaching experience might affect planning.

Question 2 encompassed the three types of beliefs teachers are thought to use when making planning decisions. In question 2a teachers were asked, in general terms, to indicate if reliance on others (colleague, principal, parent and/or resource specialist) affected how they planned. Question 2b referred to the use of reasoning or logic; question 2c, reliance on research evidence; and, question 2d, reliance on personal feelings. Probes were used to clarify what teachers meant when they used terms

such as reason, logic and feelings; also, to investigate why they chose the one that they did.

Question 3 was an objective question asking teachers how much time they spent planning each day. The reason for asking this question was based on how the amount of time might affect how teachers make planning decisions.

Question 4 was a question which asked teachers to indicate how heavily they relied on prepared materials when they planned. Probes were necessary to find out what the respondent meant when she said "heavily", "sometimes", etc.

Question 5 presented teachers with a hypothetical teaching situation where forced-choice situations were systematically presented to them. Respondents were probed for an elaboration on their choice. The forced-choice situations were:

Question 5a - practical reasoning (feelings and logic) versus peer authority

5b - practical reasoning versus parental authority

5c - practical reasoning versus district resource specialist theory

5d - practical reasoning versus principal authority

In question 6 teachers were asked to respond to the extent to which they relied on research evidence when making a planning decision. Probes were necessary to elicit an explanation of their answers.

In question 7 teachers were asked if their feelings of confidence about subject matter might influence how they planned. Specifically, they were asked to compare their confidence level in teaching science content versus social studies content. Probes were necessary to encourage the respondents to explain why "science planning" might be different than "social studies planning".

Question 8 was the last on the interview schedule. It was designed to summarize the entire interview. It was also intended to give respondents a further chance to elaborate on additional information they might use when thinking about their planning decisions.

### Subjects

All subjects for this study were teachers selected from a large, metropolitan district in a Western Canadian province. From the 1981-82 elementary staff list, the researcher chose only teachers who were presently teaching Grade 4. The fourth grade level was chosen because it typically includes a full representation of the subject

areas taught in a single classroom by one teacher. The content area of social studies was selected for the study because it allowed a great deal of latitude in how teachers decided to plan the content. Because there were few classes of only Grade 4 students, teachers who taught a Grade 3-4 split class or Grade 4-5 split class were also included in the study. Only females were interviewed since they represent the typical Grade 4 teacher. At the time of this study 85% of Grade 4 teachers in the district were female.

Selection of subjects. An initial contact letter (See Appendix II) was sent to all of the 63 female Grade 4 teachers. Only teachers meeting the following criteria were considered for the study. The sample included teachers who:

1. held a B.Ed. degree from the University of British Columbia
2. possessed a permanent teaching contract or at least a three year temporary contract in the district
3. were currently teaching full-time
4. had at least three years of teaching experience

Rationale for selection criteria. The first factor to be considered in selecting a teacher subject was one holding a four year Bachelor of Education degree from the University of British Columbia. The reason for this was the need for a certain uniformity of preservice education of selected subjects. Education and type of teacher training may influence how teachers think and in this initial study the hope was to be able to find whether or not patterns of reasoning could be discovered.

The second criterion for teacher selection was permanent teacher certification. Teachers holding a permanent teaching position were considered to be less likely in an interview situation to give socially desirable responses. A temporary teacher insecure about job permanency may feel the need to give the interviewer responses she thinks are desired. This may be the result of the subject perceiving the researcher to have some kind of authority or influence.

Full-time employment was the third factor considered when selecting subjects. Full-time employment included teachers who taught in the classroom all day or combined classroom teaching with administrative duties. Three teachers interviewed were head teachers (equivalent to a vice-principal). Part-time teachers were not selected for

two reasons: firstly, they may not have taught Grade 4 social studies, and secondly, part-time teachers may be considered to have more time to plan, prepare and mark lessons. Overall, planning decisions may differ when planning time is increased.

The fourth factor to be considered in selecting a teacher subject was experience. Teachers with at least three years of teaching experience were considered to have formalized a method of explaining how and why they plan the way they do. Requiring a sample with more than three years experience insured wide variations of experience. The mean number of years of teaching experience was 12.9.

#### Procedure

Contact with subjects. One week after teachers were mailed the initial contact letter, each potential interviewee was given a telephone call at her school, to ask for support in helping to collect information for this study. It was found that 27 teachers met the selection criteria and 20 were prepared to participate in the study -- a 74% participation rate of the subjects who met the selection criteria. At the same time, specific interview appointments were scheduled at the convenience of the teacher.

Data collection. A semi-structured interview guide (See Appendix I) was used to collect data concerning teachers' experiential planning behavior. The interview consisted of a series of eight questions most of which were open-ended and required teachers to describe and give reasons for their responses. The researcher presented each question in order and used the same wording for each respondent.

The interview schedule was piloted prior to the study. A tape recorder to tape interviews facilitated the accumulation of a precise record of the exigencies which arose in each interview. In this study, 20 interviews were taped. Interviewing time ranged in length from 20 - 40 minutes.

All interviews were conducted within a five-week period during May and June of the 1981-82 school year. All interviews, except one, were conducted in various locations within the school -- the teacher's empty classroom, the staff room, the nurse's room, the library or a small quiet cubbyhole in the school. All interviews were conducted at the teacher's convenience. Eleven interviews were conducted after school, four before school, four during lunch and one during a teacher's preparation time. The teachers seemed very responsive and co-operative during the interview. The fact that the interviewer was an

experienced teacher seemed to offer more credibility to the entire study. It was found that teachers generally responded to the interview questions in remarkably similar language. For example, teachers frequently said they "never teach the same thing, the same way twice" and they "plan according to the needs of the class". These responses lead one to suspect that their responses represent similar planning behavior.

Data analysis. Two types of data were generated and analyzed in this study. Teachers were asked for objective data about their teaching experience, time spent planning, and their use of prepared programs and materials. Respondents were also given the opportunity to make subjective responses in describing and discussing their own planning behavior. They were asked to make decisions about hypothetical planning situations based on a theoretical framework (see pp. 4-6).

It was thought that at least 20 interviews were necessary in order for patterns of planning behavior to become apparent. At the end of each interview, verbatim responses for each question were transcribed. This procedure was followed for each interview. Field notes were also recorded on file cards. These notes and transcrip-

tions were analyzed for modal patterns of response. A general procedure in analysis advocated by Lofland (1971) was followed. The steps in the procedure included:

1. Explicit rendering of the structure, order and patterns found in planning behavior
2. Sorting and ordering of phenomena
3. Construction of global design
4. Final analysis and presentation of results

In order to ascertain typical responses, the researcher drew up a chart where responses to all interview questions could be visually inspected. This chart enabled phenomena to be sorted in such a way as to facilitate analysis of results. Six major headings were used to help classify data. They were: teacher experience, teacher planning time, teacher reliance on prepared materials, teacher reliance on others, teacher reliance on evidence and teacher confidence level in science. The descriptive data classified under each heading was not easily summarized in tabular form.



## CHAPTER IV

Results and Discussion

This chapter presents the results of the field study described in the preceding chapter. The chapter will conclude with a discussion of the findings.

Results

Teacher experience. The length of teaching experience did not appear to affect planning practice of teachers. Whether a teacher taught four years or 24 years it did not seem to affect how decisions were based. However, it was found that experienced teachers were able to base social studies and science content decisions on their personally tested practices gained through experience. Typical comments were: "You sort out what is important with more experience"; and "A less experienced teacher needs to plan more".

It was not possible to ascertain whether experience was a factor which affected planning behavior. Only experienced teachers participated in the study.

Teacher confidence. The level of teacher confidence seemed to affect how teachers planned. Confidence,

however, was not a product of experience. A high level of confidence seemed to be based on a high level of subject matter knowledge of the teacher. For example, if a teacher was a science specialist she held a higher level of confidence when planning science content than a teacher who was not a specialist. A typical comment was:

The strength you feel in yourself is probably where you'd feel most confident. Science planning is different. I'm a science specialist. If I was insecure, I'd rely on other colleagues.

Teachers seemed to use the method of practical reasoning when making content planning decisions about subject matter in which they felt secure. The reason for this was probably based on a teacher's expertise of knowing how to explain and "do" experiments with the children.

Teachers seemed to use the method of authority if they felt less confident about the content matter of the subject area. Typically teachers said:

My own lack of knowledge [in science] holds me back. I tend to teach the same units over and over again. In social studies I don't do that necessarily.

Of the 20 teachers interviewed, five teachers said they liked teaching science; 15 said they did not. The five who

liked teaching science regarded themselves as science specialists and had feelings of high confidence about the subject matter; the 15 who did not enjoy teaching science as much as social studies said they were not as confident about the subject matter. Within the 15 who did not like teaching science there was a range of responses -- 11 said they felt "shaky" and "a little frightened" because they were "unsure about how experiments worked" and "the subject content was so broad"; three said they "traded off" science whenever possible; and one said she "never really taught science to her class".

Teacher planning time. In this study, teachers indicated that their planning activity involved from one half to three hours of preparation per day. There was no evidence to indicate that the amount of teacher time spent planning was related to the kinds of planning decisions teachers made. Teachers did differentiate between daily and unit planning. Daily planning involved keeping a daybook and marking. Unit planning included unit previews, yearly previews and lessons for a new unit. Teachers said this type of planning was frequently done in an extended block of time on the weekends.

In the study it was found that unmarried female

teachers seemed to spend more time planning than teachers who were married or co-habiting. Although marital status was not a factor considered in the selection of subjects, future research might investigate how it affects teacher planning behavior.

Personal perspective in planning. In this study all teachers referred to feelings and reasons as grounds on which they based their planning decisions. Implicit in this is the assumption that feelings about teaching come from teaching experience. Teachers referred to feelings and reasons as meaning almost the same thing. For example:

I see logic and feelings as being very close to each other because if you trust your own feelings you're hopefully logically coming to that decision.

I really do reason out a lot of things for myself about what I think kids can get the most benefit from. I basically trust my own feelings about it.

What logically is best for your group depends on the feelings you have about that group.

You teach what you're interested in.

Although planning behavior was frequently grounded in personally tested practices of teachers, working with others seemed to affect the judgment and decision-making

process as well. The general trend of the responses seemed to view interactions with others in a positive way. Informal interaction with colleagues in the staffroom, before and after school, in the evenings or on weekends, provided teachers with practical teaching ideas and strategies. Socializing at workshops and conferences was another avenue where teachers came in contact with their peer group and curriculum specialists.

During the interview, teachers were specifically asked how they might make a specific social studies content decision based on input from a colleague, parents, resource specialist or principal. Of the four possible responses, seven teachers felt they would be most likely to base decisions on colleague influence; six felt resource specialist influence could be strong; five felt the principal could have an influence; and the two remaining felt a combination of people could influence their decisions (one felt parent-colleague influence; another felt colleague-resource specialist). Two teachers felt student influence might be a factor to make them change their planning decisions. They felt they might be influenced by students who indicated a preference of one topic over another.

In general, colleagues seemed to provide the greatest

influence on teacher planning behavior. Their influence was greatest when teachers felt the colleague's teaching style was compatible with their own. A typical response to the question of whether a teacher might stay with her own plans or go with plans developed by a "trusted friend and a good teacher next door", was:

It would depend on how long I have been teaching Eskimos. You might be ready for a change. If I felt I was on the same wave length - like to do the same kinds of things, I might consider it. I might try it for a year ... definitely stimulating to work with others. It can drum up your enthusiasm.

Teachers also seemed to interact with colleagues at workshops and conferences where new teaching strategies and ideas were shared. It was at workshops and conferences that teachers felt that scholarly evidence had likely been used in the conceptual and contextual development of information.

The five teachers who felt the principal might influence their planning decisions said they would do so only if the principal had a school-wide goal in mind -- for example, if the principal wanted the entire school involved in a multicultural project. They felt the principal was more concerned with general school affairs than individual teacher planning. A typical response was:

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I have never worked for a principal who tells you what to do. You can always go and ask.

In this study, no teacher felt that parental involvement affected how they planned. Teachers unanimously said that if a parent volunteered to bring materials and to talk to the class about a specific topic related to the curriculum, that parent involvement was encouraged for the "children's sake" as well as the "school's sake". Typical comments were:

Super! Great! You'd be crazy not to use a resource like this since it's the kind of thing that kids remember seeing and hearing.

It gives the kids a reality base.

I wouldn't let the parent get away.

The more people coming in from the community the better the school is for it. The kids are better for it too.

A majority of the teachers said they preferred to involve the parents when it was convenient for the class. They felt it was better to "plan the parent around the program" rather than "plan around the parent". Teachers did say, however, that they would accommodate a parent coming into the classroom, at the parent's convenience, if no other alternative was available. In that respect

teacher planning decisions were affected by parents. In general, parents were seen to have little influence on how teachers based their planning decisions. Teachers still felt that they were the final arbiters of curriculum decisions.

Student influence. In this study, teachers typically described planning as a process of developing and organizing content and activities. Ultimately, this process of decision-making would be elaborated and adapted to fit the needs of students. Explicitly stated and/or implied through interviews was the notion that teacher planning behavior was intended to optimize the learning situation of students. Modal responses were:

I'd change my decision if it was for the benefit of the class.

I plan according to what the children need.

Teachers did say that student characteristics guided their planning process. Teachers mentioned characteristics such as student needs, student abilities and student maturity. Typical comments by teachers were:

Knowing your children, what they can cope with, how you change things to help them ...

I'd sift through and pull out what I'd find my kids could work at.

I never teach things the same way twice. It depends on the kids I teach. I don't want to struggle a year, so I want to teach to the group.

... more planning when you have behavior problems.

I go on my feelings and those I have of my class. I have a fairly good feeling after [the first] three weeks; a pretty good feeling by the end of October.

My units are based on need. By that I mean, I make my own decisions on which parts of the curriculum are most applicable to the kids at the time.

Availability of materials and time. In the study, teachers were asked about how heavily they relied on materials and/or programs developed by others. When teachers answered this question they did include resources (books, filmstrips, films, etc.). Respondents felt they did use materials and/or programs developed by others. In all instances but one, teachers said they relied moderately to heavily on them. The materials used ranged from provincially developed lesson aids to resources and ideas collected from local workshops and conferences attended. Whenever materials, programs or ideas were used, teachers said they adapted them to their personal perspective. A

typical comment was:

If there is something available and it fits my purpose, I'd use it very definitely. If it is available, I'd use it; but I can't say anything 100% fits my specific needs - you have to modify it in some way.

When teachers were asked about the differences in planning a science unit versus a social studies unit, they said the access to materials and equipment was very important to planning science.

If anyone has materials, I'm more than glad to look at them; but access has to be there.

Teachers do dinosaurs, sea life and animals since they don't have to rely on equipment. When you have to hunt around for [lab] equipment, it's a hassle!

Teachers said experiments were time-consuming and disruptive. Implicit in this comment is the fact that experiential science teaching may make class management and control more difficult.

Teachers also said that social studies content was more subjective than science content, therefore, there was a greater latitude for making planning decisions in social studies. Science content was thought to be more objective and factual.

Time was another factor influencing planning. In this study, all teachers said they had to have sufficient time to preview materials and programs developed by others. A modal response was:

How far in advance of getting wind of new resources would be the main factor for using these materials.

One teacher, when asked whether she would use her own planned social studies unit or one planned by a colleague said her decisions were based on "What was most expedient - time is of major importance". As far as using others' materials she said, "If I'd taught it before and the materials were prepared, I'd continue on. But, if I was unprepared and she offered me the unit - a shortcut in time, I'd certainly be influenced to change". In this case, time considerations pre-empted planning decisions. In general, the time needed for planning did not appear to influence planning decisions as much as the availability of materials.

### Discussion

In this study, teachers' planning behavior was found to be grounded in personally tested practices. It was also found that teaching behavior may be to a large degree

"planned" by the environment. These two themes will be central to the following discussion.

Isolation within the classroom. Elementary school teachers typically work all day in relative isolation from other adults. The reason for teacher isolation may lie in the fact that "those with the intimate knowledge about the work and its problems, and with the qualifications to judge it, are afforded few opportunities to come together because of the geographical properties of the workplace" (Dreeben, 1970, p. 52).

The nature of the individual classroom effectively minimizes the impact of outside influences. The formal regulatory mechanisms in schools as they affect the individual classroom are unsystematic. There is no agency within the school system that can totally penetrate the privacy and isolation of the closed-door classroom.

Individual teacher planning is also an isolated activity. Within the school setting teachers usually become aware of new materials and ideas by "talking shop" outside of school-time. In this study, teachers described planning as a process of informally gathering and collecting ideas and materials from others, with the final decision of what to use based on their own opinion. The

finding was consistent with Dreeben's work (1970) where teachers felt confident about making planning decisions without actually seeing the direct classroom use of new ideas and materials. They planned their work around activities and content which were congruent with personal priorities and experience.

Individualism within the classroom. Although schools resemble bureaucracies, teachers are simply not subject to bureaucratic role in the substance of their work (Dreeben, 1973; Lortie, 1975). Within the teacher's role lies relative individualism and autonomy. Much of the teacher's work derives its character from the exigencies of classroom, school and community events (Jackson, 1968) rather than from administrative directives. In this study, the following comments were illustrative of how teachers described their planning practice:

I think I know how kids learn, what's best, the order they learn, when, how ...

Because I've taught long enough, I feel out what I want to do and logically it seems only sensible to do things a certain way.

Individual teachers perceived that their expertise was in knowing the best way to plan and teach. Their sole

responsibility was to promote learning in the classroom. A typical response was, "Anything to get the kids to learn". Work by Jackson (1968) and Lortie (1975) support this finding. Both researchers found that when they asked teachers how they would choose to spend additional work-time, teachers overwhelmingly selected teaching-related activities rather than school-wide matters. Lortie (1975) found that 90% of teachers in his study chose individualistic classroom activities rather than working with the school at large (p. 164). Both Jackson (1968) and Lortie (1975) found that teachers' allegiance was to the classroom.

In the area of teacher planning behavior, numerous studies (Goodlad et al., 1970; Jackson, 1968; Peterson, Marx and Clark, 1978; Taylor, 1970; Zahorik, 1975) have shown that teachers simply do not conform to the highly idealized model of "rational" planning behavior where teachers are primarily concerned with teaching objectives. Teachers use a variety of normative and pragmatic criteria in selecting classroom procedures. Yinger (1978) refers to this type of planning as "purposeful" or important activity.

Influences on classroom teaching. Teachers in this

study acknowledged that external and environmental factors influenced planning decisions. Although guided by curriculum guidelines, advice from people in consulting roles, informal staffroom chatter, and availability of resources, teachers implied that no educational agent had as much direct contact and interaction with students as they did. They felt that their personal interaction with students was an important aspect of teaching. They also felt that student learning was a result of individual teacher planning and teaching style.

The relationship between school administrators and teachers in making planning decisions is minimal (Lortie, 1975). In this study, teachers said principals seemed capable of encouraging school-wide curriculum decisions, but did not seem to exercise direct influence on either individual or group planning behavior. Experienced teachers also said that they did not see the area of planning as needing the involvement of the principal. The reason for this likely originates in the past experiences of the teachers. Since most principals have not been very involved in curricular decision-making teachers do not see it as being an important part of a principal's role.

The influences of district curriculum personnel on individual teacher planning behavior is also negligible

(Lortie, 1975). Teachers in this study said they followed district and provincial guidelines as far as dissemination of general curricular content. They felt no compulsion to adopt new ideas and materials available at the resource centre, workshops and conferences. In all cases, teachers said they valued outside ideas but gave secondary position to officially designated (curriculum specialists) sources of help. They said they preferred to adapt materials from colleagues. The reason for this was not explicitly stated, however, it may lie in the fact that colleagues are thought to have first-hand classroom experience with "what works" or with "what the kids like". Also, it is generally more expedient to borrow ideas from the teacher-next-door.

### Implications

The implications of these findings on formulating district program policy are significant. If teachers are "largely self-directed" (Dreeben, 1973, p. 458), it will be difficult to implement a policy or innovation on a school, district or provincial basis. For example, if a school district wants to implement a new elementary reading program, individual teacher planning practices may resist district-wide efforts of in-service education. Findings from this study would suggest that individual teacher

perspectives might ultimately determine the fate of a new school-wide or district-wide project.

Fullan (1972) in his work on implementation found that user input or commitment was necessary in implementing a new change. He found that if teachers were not able to contribute their personal perspective to an innovation failure of the program was likely. With this in mind, program innovators will have to consider the value of the individual teacher input.

The environment of teacher isolation and individualism is disrupted fundamentally when a school innovation is initiated. A new project would likely extend beyond the scope of individual classrooms and require the co-operation of groups of teachers. It would likely generate parent interest and some type of formal evaluation. Together these factors would combine to increase visibility of the individual classroom teacher. With increased visibility comes a reduction of the isolation and autonomy of individual teachers and an increase in external control over them. Such mechanisms may cause teacher decision-making to remain dormant. Teachers may find little purpose in exercising their personal decision-making practices in program development if administrative decisions about the program have already been made. Lack of teacher involve-

ment may be one of the explanations why schools typically revert to past practices as interest in the innovation project begins to decline.

Because this study is a preliminary and speculative account of teachers' cognitive planning behavior, it would be premature to posit that there is a "best way" to plan and instruct. Instead, these findings might best be interpreted as interim steps that help educators and teachers better understand how values and attitudes affect their planning practice.



## CHAPTER V

### Summary and Conclusions

The purpose of this final chapter is to summarize the principal findings and conclusions of the study. It will also include a discussion of the limitations of the study, a proposal of recommendations and the identification of areas for future research.

#### Principal Findings and Conclusions

In this study three generalizations of teacher planning practice were found to be consistent with previous studies (see Summary of Literature, p. 21). It was found that teacher planning involved the making of judgments and decisions, that planning involved drawing upon practical and theoretical knowledge, and planning was affected by various factors outside the control of the teacher.

The goal of this study was to attempt to find out what was going on in the minds of elementary teachers when they made planning decisions of a curricular and instructional nature. On the basis of this limited study several findings were documented:

1. Teachers used the method of practical reasoning in basing their planning decisions when they felt confident about the knowledge level of the subject. The methods of authority and science were used when teachers felt less confident about their subject matter knowledge.

2. Teachers relied moderately to heavily on materials and/or programs developed by others. Teachers used materials developed by colleagues most frequently but felt that these materials needed to be previewed and adapted to their individual teaching styles and perspectives.

3. Teacher planning behavior was influenced to a large degree by two external factors -- student characteristics and availability of time and materials.

4. Length of teacher experience did not affect how teachers made planning decisions.

5. Teachers saw planning as an important activity. Teachers spent from one-half to three hours daily on curricular planning.

### Limitations of the Study

The general, descriptive nature of the study limited the generalizability of the study. The study included a small sample of teachers in one school district only. The sample included only female teachers who taught Grade 4 full-time, had at least three years of teaching experience, possessed a permanent teaching contract or at least a three year temporary contract in the district, and held a B.Ed. degree from the University of British Columbia.

The individual school settings varied to some degree. The general noise level in the school while taping the interview, the location of the interview, the location of the interview in the school and the time of day of the interview varied during the data collection.

The potential for socially desirable responses may have affected the validity of data. For example, in the study, teachers described their personal planning practices as involving one-half to three hours of daily planning. They also typically stated that individual student needs were important in planning subject matter content. The degree to which teachers gave socially desirable responses was not ascertained. Because of the general survey nature of the study, the reliability of the information gathered was not tested.

### Recommendations

Analyzing the findings of this descriptive study, it becomes apparent that teacher planning is based on how teachers personalize meaning -- a spin-off from one's unique experience. Although it is unreasonable to assume that all teachers plan the same way, measures might be taken in a general way to recommend improvements in pre-service and inservice education of teachers. These recommendations may serve as a guide to strategic research on how teachers go about planning.

Preservice programs. Since teachers' perceptions, values, attitudes and beliefs are so influential in the planning process, teachers should be trained to become aware of their perceptions about teaching. This might mean sharing and exposing unique beliefs and preferences about planning to one's peer group. This might be accomplished by offering courses and seminars for students to share how their thinking affects how they think about teaching. Although instructional methods, use of programs, equipment and materials are important to new teachers, their value in the long run is determined by teacher's interpretation and use of them.

Learning how to analyze and adapt new curricula to the

characteristics of students as well as to personally held beliefs is valuable. This recommendation is consistent with the research of Ben-Peretz (1975) who argues that teachers should be trained and supported to analyze, take apart, reorganize and reassemble curriculum materials, both to permit adaptation to fit their own unique circumstances and to give them a feeling of curriculum ownership, rather than the feeling that they are simply technicians executing someone else's plan.

Student teachers might benefit from working with a master teacher for an extended teaching practicum. Experienced teachers may be able to show student teachers how practical reasoning is the basis for making most daily classroom decisions.

The successes of such individuals tend to be born and to die with them; beneficial consequences extend only to those pupils who have personal contact with such gifted teachers ... the only way by which we can prevent such waste in the future is by methods which enable us to make an analysis of what the gifted teacher does intuitively so that something accruing from his work can be communicated to others. (Dewey, 1929, pp. 10-11)

This might encourage the inexperienced teacher to view the experienced teacher as a mentor - a helper who gives moral support and offers expertise in teaching methodology. The

appreciation of resources, ideas and programs developed by a teacher of a different perspective than one's own, is also important in the development of a teacher.

From this study, the experience gained from teaching was seen as important in knowing "how" and "what" to plan. The exposure of an inexperienced teacher to a teaching style that "works" is important and credible to a theory-laden student. How a teacher actually makes decisions about content, activities, equipment, etc., may provide a student teacher with expectations that are realistic and tenable.

Student teachers should become more acquainted with skills in the decision-making processes unique to schools. Decisions made while planning instruction may be the best ones teachers make. They can be made with careful consideration and deliberation. Hands-on experience should be available to students during practicum. Not only should inexperienced teachers get involved in classroom planning decisions but they should be encouraged to observe and participate in group decision-making. Decision-making in action can be seen during most staff or department meetings.

With the increased variety of new materials and programs available for a given subject and grade level,

efficient decision-making skills are invaluable. These skills will better equip students to deal with the increasing number of judgments one must make in teaching.

Although Lortie (1975) and McGregor (1978) posit that teacher education programs can be viewed as only partial preparation for the rigorous demands of classroom instruction, teachers can only benefit from more attention focused on the tacit dimension of teacher thinking.

We learn how to teach and how to value teaching and teachers from our earliest days and all our days thereafter. If we acknowledge the power and pervasiveness of these social and cultural processes that mould us, then we must view the future teacher as someone who is already far along in his professional education. But the fly in the ointment is obvious: the models of teaching he has learned so well ... must in large part be unlearned.... Strategies for the education of teachers must take into account the psychological problems of providing continuing support if the student is to change such firmly established behavior. (Cogan, 1976, pp. 7-8).

Inservice programs. Due to the lengthening average period of service among teachers, inservice will be necessary to increase the adaptability and flexibility of teachers in their planning practices. There is a need for staff development in reducing the intellectual narrowness

of the isolated classroom teacher. This might be accomplished by encouraging teacher interaction in the planning and development of district-wide programs and materials. Valued practitioner participation in the planning process should be encouraged. User input guarantees a higher commitment to the project (Fullan, 1972).

Teachers freely engage in much talk about their everyday curricular and instructional practices, but they do so in an uncritical and unreflective way (Mackay and Marland, 1978). If teachers do what they say they do, by basing their teaching practice on personally tested practices, then inservicing teachers effectively might be difficult. Teachers' principles of pedagogy are grounded in idiosyncratic experience.

Cogan (1973) feels what is needed is an inservice training activity designed to help teachers critically look at their own planning and teaching behavior. Cogan (1973) refers to this process as clinical supervision. Specifically, the emphasis is on the analysis of teaching materials and practices based on the view that "the analysis of teaching can be rigorous and systematic, that it should be ongoing, that it requires specific analytical skills and that the professional teacher should be a careful critic of his own practice" (Mosher & Purpel, 1972,

p. 79).

If new teaching behaviors, skills, and competencies are to be passed on effectively to teachers, then it would appear that the on-the-job coaching and support provided by the clinical supervisor would help. Teachers who differ in experience and expertise can, by this means, make contributions and offer assistance by providing feedback to each other. Teachers who experiment with different instructional behaviors would not be compelled by administrative directives to conform to a standardized method of teaching. There would be a much more collegial approach to teacher professional growth. This process should be at least recommended and encouraged at the planning stage of teaching where teachers openly admit they share and borrow ideas from one another. It might also help promote a positive attitude in the teaching of subjects where teachers feel unsure about the content. Specifically, it might help promote a more positive attitude in the minds of elementary teachers who openly admit they feel unconfident about the teaching of subjects like science.

Planning is an important part of teachers' professional lives, therefore, it is suggested that more time be granted for planning and preparation. More time for planning might mean more deliberation in planning, which means that

teachers are likely to make better decisions and judgments. They are more likely to adapt curricula and instructional methods to fit the unique needs and conditions of their classrooms. If sufficient time is needed to preview materials and develop programs, then there will have to be more organized pressure to include preparation time in teacher contracts. Clark and Elmore (1979) found that more time and support for planning paid dividends in more effective and better organized teaching and better use of expensive curriculum resources and materials.

With these recommendations in mind, a type of policy or model for the use of preservice and inservice teacher education might be constructed around a thorough understanding of how teachers think. If preservice and inservice programs are effective, one might expect that some of the effects will be represented in teachers' thoughts, as well as actions. By understanding how teachers make planning decisions, local school districts may construct materials and programs, workshops and conferences which will have a greater affect on teacher practice and ultimately classroom practice.

#### Suggestions for Future Research

Further field work is needed by looking deeper into the

psychology of planning. For example, what do teachers mean when they say "I see logic and feelings very close to each other." What do teachers mean when they say they just "know" that it [a curricular planning decision about content or materials] will "work". Studies are needed that investigate the understandings and constructs of teachers.

Practitioners over a broader educational setting should be studied to determine whether factors such as grade level, subject matter content, sex, marital status and teacher training have any effect on teacher planning processes.

Another study might involve observing teachers within a school district that has a generous allotment of teaching materials, resources and teacher preparation time, to see if they base planning decisions on different grounds than teachers from a more deprived environment. This research would be particularly valuable in the designing of inservice programs for teachers. If teachers do, in fact, rely moderately to heavily on programs and materials developed by others, particularly colleagues, then district-wide inservice training should include classroom teacher-based materials.

Suggestions for future research cannot help but profit from a multiplicity of recognized and complementary ways of

studying teaching. Besides stressing the need for solely empirical investigations, perhaps a combination of research approaches are needed to investigate the general effects of planning behavior on student learning. By combining in-depth ethnographic studies of individual teachers with empirical process-product approaches relating teacher planning behavior to learning outcomes, research might actually tap the importance of the subjective world of teacher thinking about planning. Understanding where teachers are "coming from" is essential in appreciating how and why teachers do what they do. Suggestions for future research topics may begin to open up the invisible dimension of teacher mental processes and link them to practical educational concerns.



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## APPENDIX I

April 21, 1982

Dear Colleague:

The purpose of this letter is to ask for your support in helping me gather information which will be used in writing my thesis on teacher thinking processes. I hope this research may help others understand how teachers think and in turn assist in designing more meaningful professional inservice for teachers in the future.

I would like to conduct a 30-40 minute taped interview with you in order to ask how you make curricular and instructional decisions. All information will be kept confidential and information will be used in such a way that anonymity will be assured.

As an experienced Burnaby teacher on a leave of absence, attending UBC, I am very aware of year-end school pressures, therefore I am interested in conducting interviews just as soon as possible. I will contact you by the end of April.

Although participation in this interview is voluntary, I would greatly appreciate if you would volunteer to take part in my study.

Thank you,

Barbara Ballhorn

## APPENDIX II

INTERVIEW GUIDE FOR RESEARCHER

The purpose of this interview is to gather information about how teachers make planning decisions. I hope this research will help us better understand how teachers think and in turn assist in designing more meaningful professional inservice for teachers in the future.

1. I am interested in knowing how long you have been teaching. How many years have you taught?
2. Since you are an experience teacher I am interested in knowing how you go about making decisions. If I were to ask you which of the following best describes your usual practice when it comes to making decisions about what you do in the classroom, which one would you choose?
  - a. I usually seek opinions from people I respect professionally, deciding on the basis of what they recommend. (For example, a well respected colleague, your principal, a parent's suggestion, and/or the district resource specialist.)
  - b. I usually reason things out for myself, deciding on the basis of what seems to be most logical. (Logic refers to making a judgment of one solution over another based on some kind of reason. Take for example, teaching a unit about Eskimos might be a better way to teach cultural diversity than teaching a unit on the Coast Indians because Eskimo life is so completely diferent from our way of life.
  - c. I usually read the current research literature, deciding on the basis of what the evidence seems to suggest.
  - d. I usually trust my own feelings, deciding on the basis of what feels right for me and my students. (For example, kids might enjoy studying about the Eskimo more than the Coast Indians.)

PROBE: Why did you choose the one that you did?

3. In this interview I am specifically interested in knowing how you make planning decisions. Can you tell me about what amount of time you spend planning each day?

PROBE: What do you include as planning?

4. How heavily do you rely on materials and/or programs that have been developed by others?

PROBE: What does "heavily" mean to you?

5. Now let us look at a specific planning situation and see how you might make a decision based on different factors:

You are about to plan a Social Studies unit on a specific aboriginal culture within Canada. You have narrowed down your considerations to either the Coast Indians or the Eskimos. You favor teaching the unit on the Eskimos because in the past the kids have really liked it. You have found that by teaching the Eskimo culture you are better able to teach the concept of cultural diversity because everything about Eskimo life is so radically different from our way of life. Another reason you have for preferring the Eskimos over the Indians is the simple fact that you have a large collection of materials already prepared. However ...

- a. After school the Grade 4 teacher next door, who is a trusted friend and a good teacher tells you that she has a whole unit planned on the West Coast Indians and adds that the kids just love this unit.

How would this situation affect your planning decisions.

PROBE: How would a friend and a good teacher influence your planning decision?

- b. One of your student's parents who knows a great deal about the West Coast Indians, volunteers to bring materials and to talk to the class about them.

How would this situation affect your planning decisions?

PROBE: How would a parent influence your planning decision?

- c. The intermediate resource specialist from the PRO-D Centre drops in to your class and in conversation mentions that a large number of new resources (games, pictures, lesson plans, filmstrips, etc.) have just arrived dealing with the topic of West Coast Indians.

How would this situation affect your planning decisions?

PROBE: How would a specialist influence your planning decision?

- d. Your principal mentions at a staff meeting that all staff should be more aware of the multicultural nature of your school population. Therefore, she suggests that because of the large number of native Indian students in the school, school activities if possible, specifically Social Studies projects, should reflect the diversity of the Coast Indian culture.

How would this situation affect your planning decisions?

PROBE: How would a principal influence your planning decision?

After looking at these four situations, which one would be most compelling in helping you make a decision?

PROBE: Why would one influence be stronger than the others?

6. We all know that teachers have very little time to base planning decisions on recent research evidence. Can you recall any time when you have used research evidence as a basis for making a decision no matter what the subject matter?

PROBE: What about the use of evidence when it runs contrary to what you believe?

PROBE: What about the use of evidence when you are planning social studies or science content?

(a) Considering the situation we were looking at in question 4, would you go about planning a science unit any differently than a social studies unit? (b) Would your feelings of confidence about the subject matter influence your planning decisions?

PROBE: What is the difference between "science planning" and "social studies planning"? —

8. In conclusion, if you were to indicate how you make planning decisions most frequently, which one would best represent your basis for judgment?

- a. opinions of: well-respected colleagues  
your principal  
district resource specialist  
parent(s) of your students
- b. research evidence
- c. logic
- d. feelings
- e. any other

Can you think of any other factor which might affect how you go about making a decision?

## APPENDIX III

Definitions of Terms

The following terms are used throughout this study.

1. Curriculum: refers to the course of studies within the B. C. school system.
2. Interactive teaching: is defined as the face-to-face encounters between teacher and students while teaching in the classroom (Jackson, 1965).
3. Intuitive decision-making: refers to the unconscious or subliminal grounds for belief. For example, "I have a feeling or belief that such and such is the case." It is the absence of evidence which marks it as suspect.
4. Judgment: is a concept which refers to a truth claim made in the absence of conclusive grounds (Green, 1971, p. 177). Judgments are objective in the sense that they rest upon reasons, grounds, rules or principles. Since the grounds of judgment are never conclusive, it is perfectly possible for different persons to give different judgments on the same matter and even in relation to the same grounds; and it may also be the case that such different judgments are equally reasonable. This point is important in education in the fact that there is no one "right" body of knowledge about teacher cognitive processes but rather points of view which are open to discerning judgment (Green, 1971, pp. 170-178).

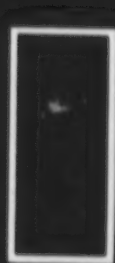
In this study the terms judgment and decision-making are used interchangeably.

5. Practical reasoning: refers to the type of reasoning that teachers likely use. At the heart of practical reasoning is an interest in solving a given problem -- solving a practical difficulty.

6. Knowledge: is a complex concept. In educational contexts, knowledge marks the whole content of our intellectual heritage which teachers are concerned to pass on to students (Scheffler, 1965).
7. Preactive teaching: is defined as what takes place before and after school, during recess and at other times when the teacher is not engaged in interactive teaching but thinking about his or her classroom teaching situation (Jackson, 1965). For example, it includes such things as preparing and planning lessons, marking papers, setting up equipment, making and running off dittos, photocopying materials, and/or thinking about how to deal with certain behavior or learning problems.

In this study preactive teaching and preactive planning are used interchangeably.

8. Teacher planning: refers to the process involving teacher thinking, decision-making and judgment. It is all that a teacher might do in advance of the interactive phase of teaching. As long as what a teacher is doing aids in preparing a guideline for future interactive teaching it counts as planning.



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